



## **EDP's Tender for EDP Renováveis** **Buying low after selling high?**

It was March 27, 2017, a typical day in Lisbon with the same routine, the same people, the usual traffic and a quite pleasant sunny day, when Mr. Nuno Pimentel arrived at his office at Av. da Liberdade and came across a subject of extreme importance. Mr. Pimentel, a portfolio manager at XYZ Asset Management, read the previous evening's announcement by Portugal's large electrical utility, Energias de Portugal (EDP), of its tender to acquire all outstanding shares of the company's publicly traded subsidiary EDP Renováveis (EDPR) at €6.80<sup>1</sup> per share. Based upon last day's closing price, a premium of 9.7% would be obtained.

Mr. Pimentel was unprepared for such surprising and unexpected news, and therefore, he approached his office balcony right at the centre of Lisbon and starred the magnificent sunny view of the Tagus river and started to assess the offer and whether he should accept it or not.

The key decision factors Mr. Pimentel weighed in his thoughts were if the amount per share offered by EDP was a fair price and the possible consequences of his decision. Thus, he came back to his office and after gathering all the relevant information and considering all the available options (**Exhibit 1**), he performed his own valuation.

Nevertheless, on April 21, 2017, Mr. Pimentel's noticed that Massachusetts Financial Services (MFS) Investment Management's portfolio managers sent an open letter to EDP's Executive Board of Directors presenting their reasons why they would not be selling their shares at the Tender. Indeed, MFS' portfolio managers, entirely disagreed from EDP's valuation methodology and resulting offered price and announced their opposition to the proposed Tender. Consequently, as MFS considered that EDP would be paying an unfair value for EDPR's shares, a "valuation battle" started between the two most important shareholders of EDPR.

While EDP controlled 74.5% of EDPR's shares when the offer was announced, MFS and its Investment Management subsidiaries controlled 4.07% of the total shares outstanding and 4.04% of the total voting rights. MFS represented the most important threat for EDP to pursue with its offer as MFS was the most relevant minority shareholder of EDPR. Under Spanish markets law a shareholder that acquires 90% of the shares encompassed by the offer and consequently reaches, 90% of the outstanding shares of a publicly listed company, has the right to buy all the remaining outstanding shares and subsequently delist the company. Thus, if MFS rejects EDP's offer, the

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<sup>1</sup> Price without Dividend adjustments

latter would likely not be able to acquire the minimum 90% of the shares encompassed by the offer and therefore would not be possible to launch a compulsory acquisition<sup>2</sup>.

For Mr. Pimentel this would raise a few questions. While selling the fund's shares would result in an immediate capital gain, joining the activists to force EDP to raise its offer could result in an even higher one. Or, in a failed offer without any prospects of any such other offer in the near future. Then, he sat at his office to review all the relevant issues and the alternatives he faced.

## EDP – Energias de Portugal

Energias de Portugal (EDP) is a vertically integrated Portuguese utilities' company. Founded in 1976, resulted from the nationalization and merger of Portuguese electricity operators. EDP, headquartered in Lisbon, was initially incorporated as a government owned company. Then, in 1997, the government decided to privatize the company. This privatization process was made in 5 different phases. On June 17, 1997, during the first privatization phase, the shares representing the EDP share capital were admitted to trading in the official stock exchange *Euronext Lisbon*<sup>3</sup> at €2.16 per share. Then, after subsequent reprivatisation phases, more EDP's shares have been admitted in the *Euronext Lisbon*. In December 2011, China Three Gorges (CTG), a Chinese state-owned power company, won the bidding for 21.35% of the share capital and voting rights of EDP, becoming the most relevant shareholder of the electric company.

The EDP Group's activities are centred on the generation, distribution and commercialization of electric power, as well as the information technologies areas. In addition, the group's business includes complementary areas, such as water, gas, engineering and laboratory testing, vocational training and real estate management. Initially, the company started its operations in Portugal, however, given the geographical proximity of Spain, the Iberian Peninsula electricity market became a natural market for EDP, even though its wind energy assets are held through EDP Renováveis.

EDP performs all these activities through the Group's subsidiaries (**Exhibit 2**). However, since 2017 EDP has been modifying its business portfolio, mainly through the divestment of its gas distribution operators in the Iberian Peninsula. On March 27, 2017, EDP informed it would sell *Naturgas Energía Distribución* and on April 7, 2017, EDP announced that it would dispose of its gas distribution utility *EDP Gás*.

EDP was changing its portfolio to focus on production and distribution of electricity and consequently, increase its profitability. Thus, the company was selling assets with lower profitability levels and was investing in other asset classes with higher profitability, such as, renewable energy assets. These two acquisitions would be essential to both reduce EDP's level of debt and fund its offer for EDPR. In addition, since the renewable energy assets are typically owned through a Special Purpose Vehicle (SPV), EDP would have easy access for credit for these renewable projects without affecting the parent company.

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<sup>2</sup> Compulsory acquisition: used to force all the minority shareholders to sell their shares without the owners' consent.

<sup>3</sup> Lisbon Stock exchange at that time.

In 2016, EDP ranked among Europe's major electricity companies and was the third largest generator in the Iberian Peninsula. The company was present in 14 countries and had more than 9.8 million electricity consumers worldwide (**Exhibit 3**).

### The Green Bubble

By the end of 2005, the renewables energy sector captured investors' attention as the number of renewable energy companies was significantly increasing. Investors were starting to be interested in this clean technology and consequently, there was a lot of capital moving towards to this sector. Therefore, many Initial Public Offerings (IPO's) took place at that time and consequently, the renewables industry became one of the fastest growing and profitable industries in the world. Countries were increasing their incentives to those companies, analysts were supporting the idea of excess demand of renewable energy and even books the topic "The Green Bubble"<sup>4</sup> were written.

As it is possible to assess by the performance of *Renixx Renewable World Index*<sup>5</sup>, this renewable energy index outperformed two of the most relevant indexes in the world – *S&P 500* and *Euro Stoxx 50* - from 2005 to 2010 (**Exhibit 4**). Therefore, the end of 2007 looked like the perfect time for EDP to launch one of its most important subsidiaries in the market. So, in 2008, EDP Group opted for an IPO on the *Euronext Lisbon Stock Exchange* to increase the visibility of a "pure player in renewables" and, at the same time, to extract all the value growth and potential of its renewables division, allowing for industry improvement and activity. This was the biggest IPO in Europe at that time. According to António Mexia, EDP's CEO:

*"The main objective of the IPO is to support the leadership position of EDP Renováveis and its program of growth"*<sup>6</sup>

Hence, in December 2008, EDP Group was the key shareholder, holding 77.5% of the share capital of the company recently headquartered in Madrid. Mexia was naturally proud:

*"(...) after EDP Renováveis Initial Public Offering in NYSE Euronext's Lisbon market last June, the largest in Western Europe. Undoubtedly, this was the event of the year for EDP Renováveis, for the EDP Group as well as a milestone for the financial sector in Portugal and Europe."*<sup>7</sup>

### EDP Renováveis

EDP Renováveis started as a renewables division within EDP and it commenced in 1993, when *Genesa*, a renewable company controlled by EDP Group, installed its first wind farm. Since then, the business has constantly been growing essentially through the development of greenfield projects and the acquisition of new projects and companies that fit with EDPR growth strategy. There were very important acquisitions marked as pillars of EDP Renováveis' history since they enabled more efficient management and structure of its business. Particularly, in 2007, the

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<sup>4</sup> Wimmer Per, *The Green Bubble*, 2015.

<sup>5</sup> The Renixx World Index is the first global stock index, which comprises the performance of the 30 largest companies worldwide of renewable energy industry (weighted by the market capitalization).

<sup>6</sup> António Mexia, 2008 "EDP to price renewables IPO at 7.4-8.9 Euros/share". in Reuters Market News

<sup>7</sup> António Mexia in EDPR Annual Report 2008.

acquisition of Horizon Wind Energy in the U.S., which empowered EDPR to separate its business from EDP Group, was one of the most remarkable M&A transactions the company performed.

Incorporated in Madrid, Spain, the company specializes in the development, construction and operation of solar photovoltaic and wind farms (both off-shore and on-shore projects). This sector was usually the beneficiary of incentives provided by governments, different among countries, such as subsidies to investment, Power Purchasing Agreements (PPA), feed-in tariffs, guaranteeing minimum returns on investment (Europe) or tax benefits (US). These regulatory frameworks combined with the characteristics of the renewable resource, typically translate into stable and predictable cash-flows and low costs of capital.

Taking advantage of the outstanding performance of this division alongside with the overall industry growth, on June 2, 2008, António Mexia, Chairman of EDPR, decided to carve-out this subsidiary through an Initial Public Offering and sell 22.5% of EDP Renováveis via an IPO. Therefore, EDPR's shares would become available for trade on June 4, at €8.00 per share at the *NYSE Euronext Lisbon*<sup>8</sup>. Therefore, 2008 was a very important year for EDP Renováveis. The company became the 4<sup>th</sup> largest renewables company in the world and the 2<sup>nd</sup> largest publicly listed company in the European renewables sector. Furthermore, in the same year, the company installed an additional capacity of 1.413 gross MW (744 MW in Europe and 669 MW in North America), accordingly with the target defined upon the IPO<sup>9</sup>. So, at the end of 2008, EDP Renováveis had more than 5.0 GW of installed capacity with high Load Factors of renewable energy (**Exhibit 5**).<sup>10</sup>

By 2016, EDPR was a leading renewable energy company with 10.408 MW of installed capacity, present in many European countries and the Americas (**Exhibit 6**).

As of December 31, 2016, EDPR's shareholder structure consisted of a total qualified shareholding of 80.6%, with EDP and MFS Investment Management detaining 77.5% and 3.1% of EDPR share capital and voting rights, respectively. Furthermore, EDPR had many other investors spread across 23 countries, representing about 19.4% of its share capital (**Exhibit 7**).<sup>11</sup>

### Self-Funding Model

Initially, EDPR funded its operations with corporate debt raised from EDP. However, the company changed its funding model, which has become one of the most important pillars of its corporate strategy. Indeed, the success of this strategy was fundamental to accelerate value creation and it can be described as a combination of Retained Cash Flow from operating assets and Asset Rotation strategy.

The fundamental source of funds of EDP Renováveis has been the EBITDA generated from its current assets, which after paying debt and all required costs, is called Retained Cash Flow. These

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<sup>8</sup> EDP Renováveis' trading code: EDPR

<sup>9</sup> EDPR set an objective of reaching 10.5 GW of installed capacity by 2012, three times more than the value in 2007.

<sup>10</sup> Load Factor: A ratio between the average energy produced per hour (MWh) and the production capacity installed (MW). In other words, a ratio between energy produced and power installed. A ratio of 100% is only possible if the power plant operates at full capacity 100% all the time. In renewable energy, due to the variability of the renewable resource availability (sun and wind) load factors are much lower than these of conventional fossil fuel plants.

<sup>11</sup> Free Float of 19.4% - Shares held by other parties available for trading.

Cash Flows were available to pay-out dividends to shareholder or to reinvest in new projects or companies. Therefore, strong Retained Cash Flow allowed EDPR to partially fund growth. In 2016, EDPR announced a dividend pay-out policy ranging from 25% to 35% of its annual net profit which allowing that most of the cash flow was available to fund growth. In May 2016, the company paid €44 million in dividends, corresponding to the low end of the range announced at the beginning of the year. Furthermore, Retained Cash Flow increased 13% to €698 million and EDPR was expected to retain approximately €3.9 billion from 2016 to 2020.

Most utilities have been profiting from the development and construction of energy projects and then selling stakes to institutional investors and other financial players. On the one hand, this strategy allowed investors to take projects during low-yield environments and on the other hand, utility companies got compensated for the high levels of risk taken before the operation phase (**Exhibit 8**). It was common to sell a minority stake (typically 49%) when the wind farm was complete. EDPR, as wind farm developer, will still operate the farm but frees up capital that might be used for another investment, crystalized the value, limited the pressure on its balance sheet from big capital expenditures invested at the beginning and gave the returns to its shareholders. For the period 2016 to 2020 EDPR had the target to complete €1.1 billion of Asset Rotation, which as of December 2016 has already executed €550 million.

### Value Creation

EDPR has been creating value through a systematic process of dividing the industry value chain in three main distinct phases: development, construction and operation (**Exhibit 9**). This plan represented the fundamental base for the Asset Rotation strategy.

Value for EDPR was mostly created during the development and construction phase since the company's distinct strategic competences were more valuable there, which allowed it to be in a particular favourable position to undertake the corresponding risks.

The development phase is critical, being the riskiest phase and the one in which a large portion of value is built. Typically, finding sites that have good conditions in terms of availability of the natural resource (sun or wind) that would allow farms to operate at high load factors is a critical step requiring good technical capabilities. Then, it is fundamental to guarantee all the necessary licenses and permits from the regulatory authorities. It is important to note that these licenses and permits are different among countries. Furthermore, it is essential to secure the government support through a feed-in-tariff or tax benefits for the duration of the project. These may be acquired through direct negotiations or competitive tenders. In the latter case, good skills on the construction phase may allow for cheaper investment or equipment with more quality leading to the possibility of submitting better terms on the tender and successfully winning the bid. On this second phase, where another portion of value is built, besides good procurement capabilities, successful companies have superior abilities on executing the construction and installation of the.

Therefore, when EDPR enters the third phase and starts operating the renewable energy plant, the only remaining risks are associated with operational issues, such as equipment break down and, to a lesser extent, errors made on the previous phases (lower than predicted availability of the resource and equipment problems and malfunctions).

Finally, it is very important to understand that at the end of life of a project, its value decreases since the feed-in-tariff (or tax benefit) is guaranteed for a fixed number of years (typically 15-20 years). So, it is possible to understand the way renewable companies create maximum value until

the Commercial Operation Date and some of these companies typically sell a minority stake before the operation phase.

### **Massachusetts Financial Services (MFS)**

As of December 31, 2016, apart from the qualified shareholding of EDP, Massachusetts Financial Services and its Investment Management subsidiaries controlled 35.5 million shares of EDPR, which representing 18.23% of the floated share base, 4.07% of the total shares outstanding and 4.04% of the total voting rights.

MFS Investment Management was the America's first mutual fund, founded in 1924 in Boston. This asset manager notified qualified shareholding of EDPR on September 25, 2013. Thus, from 2013 to 2016, MFS owned 3.1% of EDPR share capital and voting rights. Summing up MFS's shares with the shares owned by its subsidiaries, the American Investment Management controlled more than 4% of EDPR. MFS also owned shares in EDP on behalf of its clients.

One month after EDP announced the Tender offer for EDPR's minority stakes, Mrs. Maura Shaughnessy and Mr. Claud Davis, the fund's portfolio managers, wrote an open letter to the EDP's Board of Directors presenting their reasons why the amount offered by EDP was unfair and asking other minority shareholders to review their analysis (**Exhibit 10**). This letter was also sent to EDPR's Board of Directors (**Exhibit 11**).

### **The offer**

EDP, the parent company, has been acknowledging the positive impact on its core business model of becoming the unique shareholder of EDP Renováveis and therefore having full control over this subsidiary. EDP's CEO mentioned that the focus in the electricity generation through renewable energy resources was one of the most important pillars of EDP's business and growth strategy. Furthermore, in the 5 years prior to the announcement, EDP was investing 40% of its CAPEX in EDPR and the contribution of the latter in EDP's EBITDA was increasing, reaching 31% in 2016. The announced strategic rationale for the deal was to increase cooperation in specific markets between EDP and EDPR and would be a key point to reinforce the leadership position that EDPR had.

Additionally, regarding the Equity Story of EDP in the European capital markets, the company contended there would be no advantages by having two publicly-traded companies in the same holding and it pointed some weaknesses about EDPR's limited free-floating stock such as its low liquidity levels<sup>12</sup>. Therefore, António Mexia, EDP's CEO, announced the company's wishes to delist EDP Renováveis from Euronext Lisbon.

Hence, in late 2016, EDP's executives and its financial advisors, *Millennium Investment Bank* and *Santander Totta*, began serious discussions about the acquisition's price of EDPR's shares. On March 27, 2017 EDP announced that it would offer to purchase all the minority stakes of EDP Renováveis at €6.80 per share fully paid in cash. The offer period would be from July 6, 2017 to

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<sup>12</sup> Liquidity refers to the percentage of total number of shares traded during the last 6 months relative to the free-float.

August 3, 2017 and the relevant sell orders must be received up to the end of that period. The results of the offer would be announced on August 4, 2017.

Moreover, EDP was considering the delisting of EDPR's shares from *Euronext Lisbon*. Therefore, if as a result of this Tender offer, EDP comes to hold, more than 90% of the voting rights corresponding to the share capital of EDPR, EDP would deliberate the possibility to request Euronext Lisbon to delist the shares of the acquired company. In addition, in case EDP comes to hold at least 90% of the share capital of EDPR and acquires at least 90% of the shares encompassed by the offer, shall be considered:

- i. The exercise of a "squeeze-out right" by EDP, allowing EDP to compulsory acquire the shares not sold and consequently, exclude all the minority shareholders from EDPR.
- ii. The exercise of a "sell-out right" by the shareholders of the remaining shares of EDPR that are not held by EDP.

Either if EDP requests to delist EDPR from the stock market or in both exercise rights referred above, EDP should secure the payment of the same consideration price for an additional period of 3 months to the minority shareholders after August 4, 2017.

Considering the 676,283,856 shares held by EDP, the offer to acquire 196,024,306 shares not owned by EDP, represented approximately 22.47% of the target's equity value.

*"The consideration offered, payable in cash, is of €6.80 per Share, subject to deduction of any gross amounts which may be attributed to each Share, such as dividends, advance for account of profits or distribution of reserves, such deduction to be made from the moment in which the right to said amount has been detached from the Shares and provided such detachment occurs prior to the financial settlement of the Offer."*<sup>13</sup>

On April 6, 2017, EDP announced a dividend of €0.05 per share that would be paid to shareholders at May 8, 2017. Therefore, the consideration to be effectively be paid in cash, should be €6.75 per Share.

The offered consideration of €6.80 and the consideration to be paid represent a premium of 9.7% and 8.9%, respectively, relative to the closing price of the shares on the day before the preliminary announcement (**Exhibit 12**). EDP also mentioned that the closing price of the Shares was only above the consideration to be paid per share only in 15.5% of the trading sessions since the IPO of EDP Renováveis.

Another action considered by EDP was the possibility of a cross-border merger between EDP and EDPR. In case a cross-border merger occurs, this must be approved by the management bodies of both companies and consequently, EDP should absorb EDPR. Therefore, the shares of EDPR would no longer be admitted to trading in the market.

## Valuation

MFS' open letter to the Board of Directors of EDP was a response to the price offered by EDP. The €6.75 per share offered by EDP represented a premium of 8.9% over the closing price before the announcement date. However, the analysts' average target price on the day before the preliminary announcement was 6.1% higher than the amount offered by EDP (**Exhibit 13**).

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<sup>13</sup> Prospectus for General and voluntary tender offer dot the acquisition of shares representative of the share capital of EDP Renováveis, S.A.

In this specific case, EDP mentioned that EDPR was being traded at low liquidity levels when compared with liquidity levels of EDP and the target companies of recent comparable Tender offers, on the European renewables sector in the 6 months prior to the date of respective announcements (**Exhibit 14**). Therefore, EDP mentioned this could be an excellent opportunity for minority shareholders to have an exceptional liquidity event. However, even though EDPR had low liquidity levels, some minority shareholders invested in this company with the purpose of taking long term positions.

In the Prospectus, EDP valued EDPR based on comparable companies' trading multiples EV/EBITDA and compared with the premium paid in Public tender offers over comparable European companies. In addition, EDP compared its pre-determined range with EDP Renováveis' equity analysts target prices and justified the non-suitability of other methodologies in the offer Context - Implied EV/MW & Book Value per share.

However, to show its disappointment with the offered price, MFS chose two fundamental metrics: Asset Value and Cash Flow. Regarding the first one, MFS considered that Asset Value should be determined based both on EV/MW of precedent transactions of EDPR and its peers. Regarding Cash Flow, the Fund computed a simple multiple valuation based on EV/EBITDA and considered Retained Cash Flow from EDPR to determine its ability to grow profitably. Based on MFS's valuation, the Fund concluded EDP was undervaluing EDPR as the price per share resulted from its valuation was 35% higher than the price per share offered by EDP.

### **The Final decision**

EDP's Tender offer announcement for EDPR was followed by serious criticism. Some minority shareholders of the target company considered the price offered by EDP significantly low and that it did not reflect the real situation of EDPR. Thus, this could be a good time for risk takers that did not believe the Tender offer would end successfully and therefore they could buy more shares and wait for an increase in EDP's offered price.

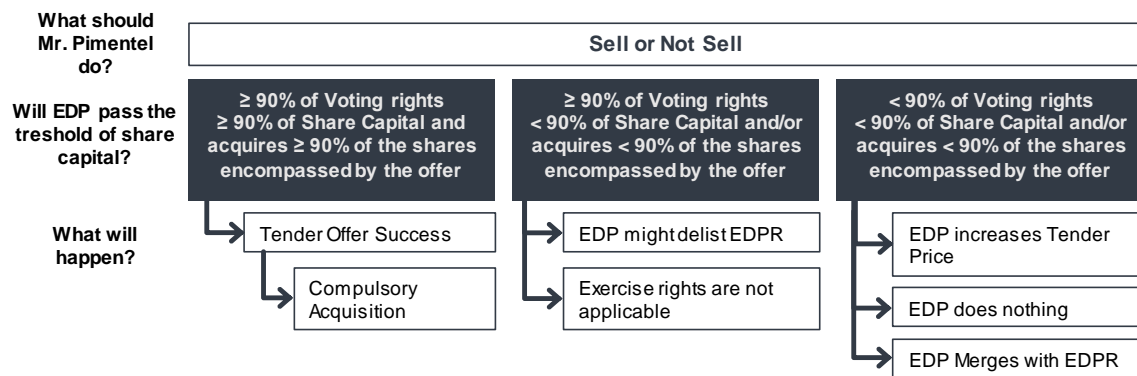
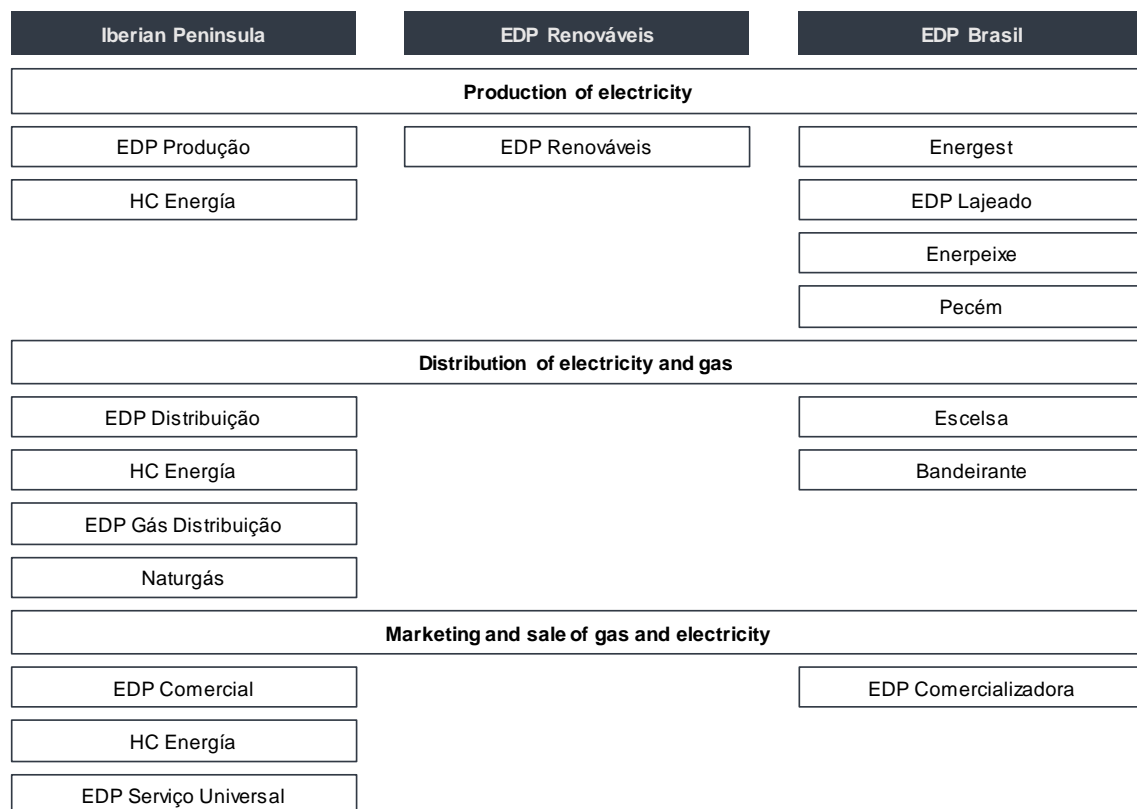
Mr. Nuno Pimentel was about to decide the future of the XYZ Asset Management Fund's shares. After carefully considering both the offer from EDP, opening the letter from MFS and prudently analysing all the information collected from EDP Renováveis, Mr. Pimentel performed his own valuation. What should Mr. Pimentel do? Is this the right time to sell? Is EDP paying a fair price? Is EDP taking advantage of a liquidity discount?

In addition, he weighted the possible risks of rejecting the offer. The biggest problem would come if Mr. Pimentel does not sell the shares, EDP does not reach 90% of the share capital of EDPR neither pursue with the compulsory acquisition and does not request CMVM to delist EDPR's shares from the stock market. Under this scenario, EDPR still is admitted for trading, nonetheless, its liquidity level decreases even more.

Under the hypothetical scenario that the offer does not end successfully, what could be the main issue for Mr. Pimentel? Cross-Border merger could be a problem? Finally, the most important question focuses on how desperate was EDP to regain full control of EDPR?

Those were the main questions Mr. Pimentel considered. Unexpectedly, a typical day in the morning became the beginning of many important days for Mr. Nuno Pimentel.



**Exhibit 1 – Mr. Nuno Pimentel's dilemma****Exhibit 2 – EDP's Organization Structure<sup>14</sup>**

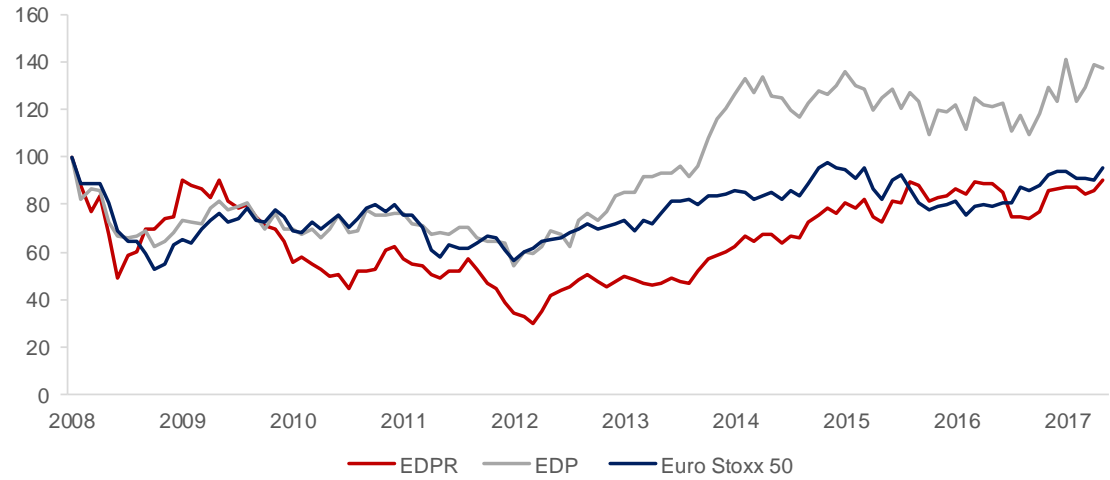
<sup>14</sup> At the beginning of 2017, EDP was divesting its gas distribution operations in the Iberian Peninsula. EDP was selling both EDP Gás and Naturgás.

**Exhibit 3 – EDP's world presence 2016**

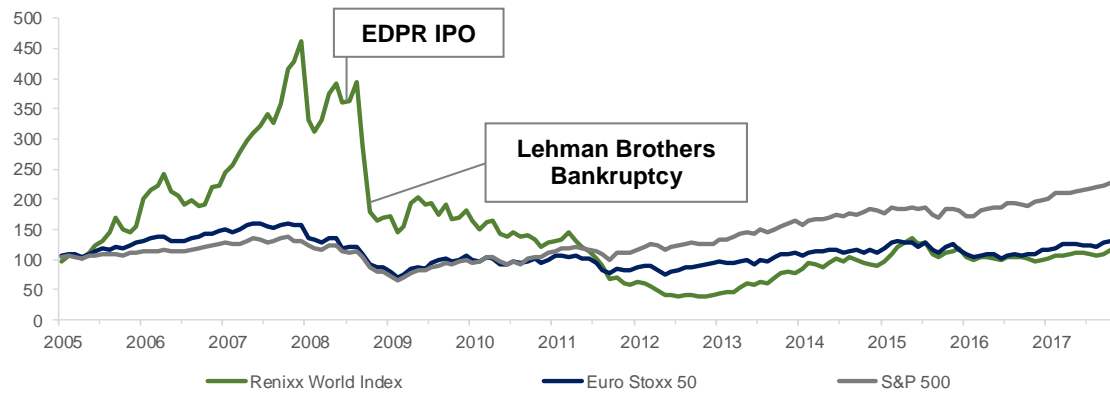


Source: EDP Annual report 2016

**Exhibit 4 – Stocks' performance and Renewables World Index**



Source: Bloomberg



Source: Bloomberg

**Exhibit 5 – EDP Renováveis' key figures**

Operating Data	2008	2009	2010	2011	2012	2013	2014	2015	2016
<b>Installed Capacity (EBITDA MW + Eq. Consolidated)</b>	<b>4.400</b>	<b>5.576</b>	<b>6.676</b>	<b>7.483</b>	<b>7.987</b>	<b>8.565</b>	<b>9.036</b>	<b>9.637</b>	<b>10.408</b>
Europe	2.477	2.938	3.439	3.977	4.266	4.796	4.938	5.141	5.163
North America	1.923	2.624	3.224	3.422	3.637	3.685	4.014	4.412	5.041
Brazil		14	14	84	84	84	84	84	204
<b>Electricity Generated (GWh)</b>	<b>7.807</b>	<b>10.907</b>	<b>14.352</b>	<b>16.800</b>	<b>18.445</b>	<b>19.187</b>	<b>19.763</b>	<b>21.388</b>	<b>24.473</b>
Europe	3.900	4.975	6.632	7.301	8.277	9.187	9.323	10.062	11.230
North America	3.907	5.905	7.689	9.330	9.937	9.769	10.204	11.103	12.576
Brazil		26	31	170	231	230	236	222	666
<b>Load Factor (%)</b>	<b>30%</b>	<b>29%</b>	<b>29%</b>	<b>29%</b>	<b>29%</b>	<b>30%</b>	<b>30%</b>	<b>29%</b>	<b>30%</b>
Europe	26%	26%	27%	25%	26%	28%	27%	26%	26%
North America	34%	32%	32%	33%	33%	32%	33%	32%	33%
Brazil		22%	26%	35%	31%	31%	32%	30%	35%
<b>Average Selling Price (€/MWh)</b>	<b>65,9</b>	<b>58,8</b>	<b>58,4</b>	<b>57,7</b>	<b>63,5</b>	<b>62,6</b>	<b>58,9</b>	<b>64,0</b>	<b>60,5</b>
Europe (€/MWh)	98,0	87,2	84,2	88,0	94,2	89,3	80,3	83,0	81,5
North America (\$/MWh)	33,2	34,7	34,3	32,8	47,1	48,4	50,8	51,0	46,4
Brazil (R\$/MWh)	0,0	0,0	109,4	119,7	286,4	309,2	346,4	370,4	216,1
<b>Employees</b>	<b>630</b>	<b>721</b>	<b>822</b>	<b>796</b>	<b>861</b>	<b>890</b>	<b>919</b>	<b>1.018</b>	<b>1.083</b>
Europe	324	365	398	393	393	467	434	445	455
North America	276	303	332	260	251	298	316	383	422
Brazil		8	17	16	21	23	26	32	34
Holding	30	45	75	127	196	102	143	158	172

Source: EDPR Investor Relations

**Exhibit 5.1 – EDP Renováveis' consolidated Income Statement**

Consolidated Income Statement (€m)	2008	2009	2010	2011	2012	2013	2014	2015	2016
Electricity sales and other	520,2	642,0	840,6	957,2	1.157,8	1.191,3	1.153,1	1.349,6	1.453,2
Income from institutional partnerships	61,2	82,7	107,0	111,6	127,4	125,1	123,6	197,4	197,5
<b>Revenues</b>	<b>581,4</b>	<b>724,7</b>	<b>947,7</b>	<b>1.068,8</b>	<b>1.285,2</b>	<b>1.316,4</b>	<b>1.276,7</b>	<b>1.547,1</b>	<b>1.650,8</b>
Other operating income	28,3	42,6	73,0	84,5	63,1	41,4	45,7	161,6	53,8
Operating costs	(171,8)	(224,7)	(307,9)	(352,6)	(410,7)	(437,2)	(419,2)	(566,3)	(533,6)
Supplies and services	(107,0)	(148,3)	(196,2)	(225,1)	(261,8)	(255,2)	(256,6)	(292,7)	(304,7)
Personnel costs	(38,1)	(42,6)	(54,9)	(60,8)	(62,7)	(66,5)	(66,1)	(84,3)	(93,9)
Other operating costs	(26,8)	(33,8)	(56,9)	(66,7)	(86,2)	(115,6)	(96,4)	(189,3)	(134,9)
<b>EBITDA</b>	<b>437,9</b>	<b>542,6</b>	<b>712,8</b>	<b>800,7</b>	<b>937,6</b>	<b>920,5</b>	<b>903,2</b>	<b>1.142,3</b>	<b>1.171,0</b>
EBITDA/Revenues	75,0%	75,0%	75,0%	75,0%	73,0%	70,0%	71,0%	74,0%	71,0%
Provisions	0,8	0,2	0,2	0,3	-	(1,3)	(0,0)	0,2	(4,7)
Depreciation and amortisation	(207,8)	(314,4)	(434,4)	(468,5)	(502,7)	(464,7)	(499,8)	(587,5)	(624,5)
Amortisation of deferred income (government grants)	0,7	2,4	11,4	15,0	15,2	18,5	19,0	22,8	22,2
<b>EBIT</b>	<b>231,6</b>	<b>230,8</b>	<b>289,9</b>	<b>347,5</b>	<b>450,1</b>	<b>473,0</b>	<b>422,4</b>	<b>577,8</b>	<b>564,0</b>
Financial income/(expense)	(74,9)	(72,2)	(174,2)	(233,6)	(274,9)	(261,7)	(249,9)	(285,5)	(350,1)
Share of profit from associates	4,4	3,9	5,0	4,8	6,8	14,7	21,8	(1,5)	(0,2)
<b>Pre-tax profit</b>	<b>161,2</b>	<b>162,5</b>	<b>120,8</b>	<b>118,7</b>	<b>182,1</b>	<b>226,0</b>	<b>194,3</b>	<b>290,8</b>	<b>213,7</b>
Income taxes	(49,0)	(44,8)	(37,8)	(28,0)	(46,0)	(56,9)	(16,4)	(45,4)	(37,6)
Profit of the period	112,2	117,8	83,0	90,6	136,1	169,1	177,9	245,5	176,1
<b>Equity holders of EDPR</b>	<b>104,4</b>	<b>114,4</b>	<b>80,2</b>	<b>88,6</b>	<b>126,3</b>	<b>135,1</b>	<b>126,0</b>	<b>166,6</b>	<b>56,3</b>
Non-controlling interests	7,9	3,4	2,8	2,0	9,8	34,0	51,9	78,9	119,8

Source: EDPR Investor Relations

**Exhibit 5.2 – EDP Renováveis' Balance Sheet**

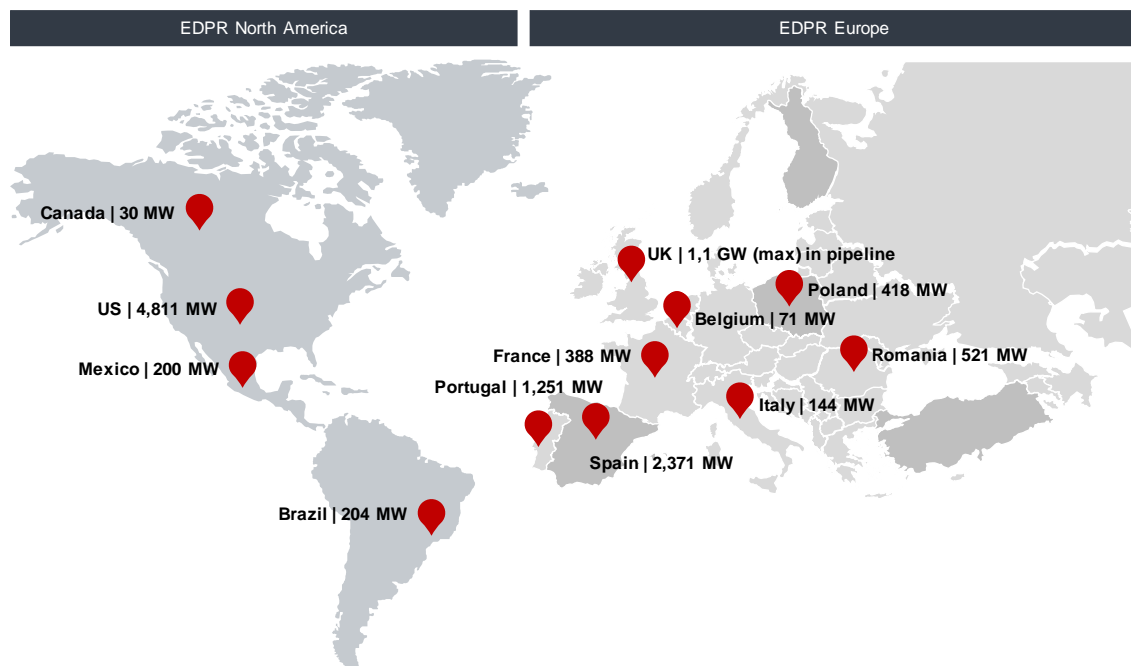
<b>Assets (€m)</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Property, plant and equipment, net	7.053	8.635	9.982	10.455	10.537	10.095	11.013	12.612	13.437
Intangible assets and goodwill, net	1.395	1.336	1.367	1.334	1.327	1.301	1.405	1.534	1.596
Financial Investments, net	53	60	64	61	57	346	376	340	348
Deferred tax asset	22	28	39	56	89	109	46	47	76
Inventories	12	11	24	24	16	15	21	23	24
Accounts receivable - trade, net	83	106	144	146	180	202	146	222	266
Accounts receivable - other, net	512	637	757	750	800	655	859	338	338
Financial assets at fair value through profit and loss	36	37	36	0	0	0	-	-	-
Collateral deposits	-	-	-	-	49	78	81	73	46
Assets held for sale	1	-	-	-	-	-	-	110	-
Cash and cash equivalents	230	444	424	220	246	255	369	437	603
<b>Total Assets</b>	<b>9.397</b>	<b>11.294</b>	<b>12.835</b>	<b>13.045</b>	<b>13.302</b>	<b>13.058</b>	<b>14.316</b>	<b>15.736</b>	<b>16.734</b>

<b>Equity (€m)</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Share capital + share premium	4.914	4.914	4.914	4.914	4.914	4.914	4.914	4.914	4.914
Reserves and retained earnings	89	192	274	325	384	623	742	891	1.155
Consolidated net profit attrib. to equity holders of the parent	104	114	80	89	126	135	126	167	56
Non-controlling interests	83	107	126	127	325	418	549	863	1.448
<b>Total Equity</b>	<b>5.190</b>	<b>5.328</b>	<b>5.394</b>	<b>5.454</b>	<b>5.749</b>	<b>6.089</b>	<b>6.331</b>	<b>6.834</b>	<b>7.573</b>

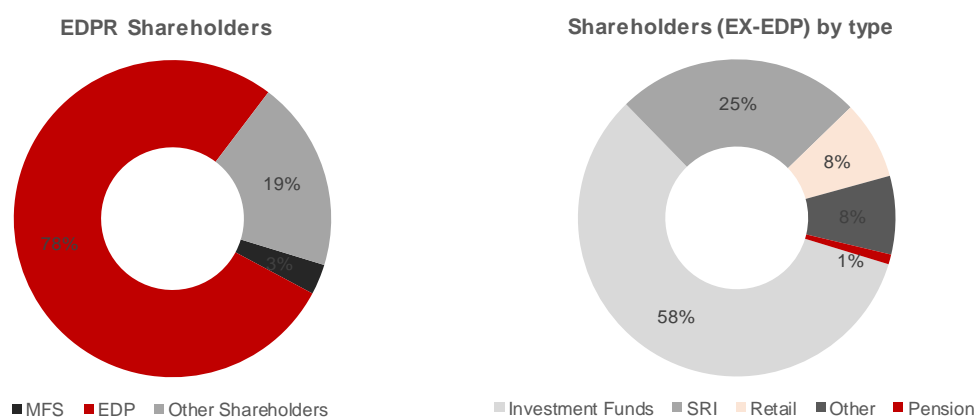
<b>Liabilities (€m)</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Financial Debt	1.462	2.673	3.534	3.826	3.874	3.666	3.902	4.220	3.406
Institutional Partnership	895	920	1.009	1.011	942	836	1.067	1.165	1.520
Provisions	51	67	54	58	64	65	99	121	275
Deferred Tax liability	303	343	372	381	381	367	270	316	365
Deferred revenues from institutional partnerships	202	434	635	773	738	672	735	791	819
Other liabilities	1.293	1.529	1.839	1.542	1.555	1.363	1.912	2.288	2.776
<b>Total Liabilities</b>	<b>4.206</b>	<b>5.966</b>	<b>7.442</b>	<b>7.591</b>	<b>7.553</b>	<b>6.969</b>	<b>7.986</b>	<b>8.902</b>	<b>9.161</b>

<b>Total Equity and Liabilities</b>	<b>9.397</b>	<b>11.294</b>	<b>12.835</b>	<b>13.045</b>	<b>13.302</b>	<b>13.058</b>	<b>14.316</b>	<b>15.736</b>	<b>16.734</b>
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Source: EDPR Investor Relations

**Exhibit 6 – EDP Renováveis' world presence 2016<sup>15</sup>**

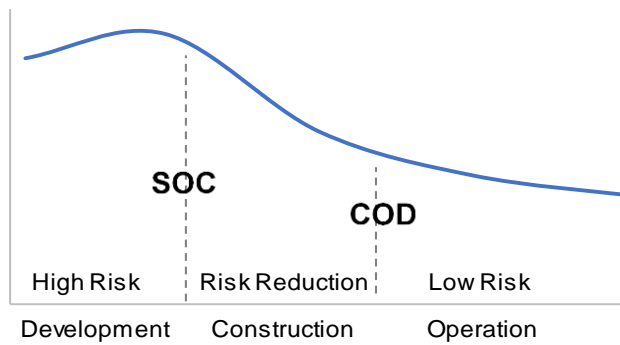
Source: EDPR Annual Report 2016

**Exhibit 7 – EDP Renováveis' shareholder structure**

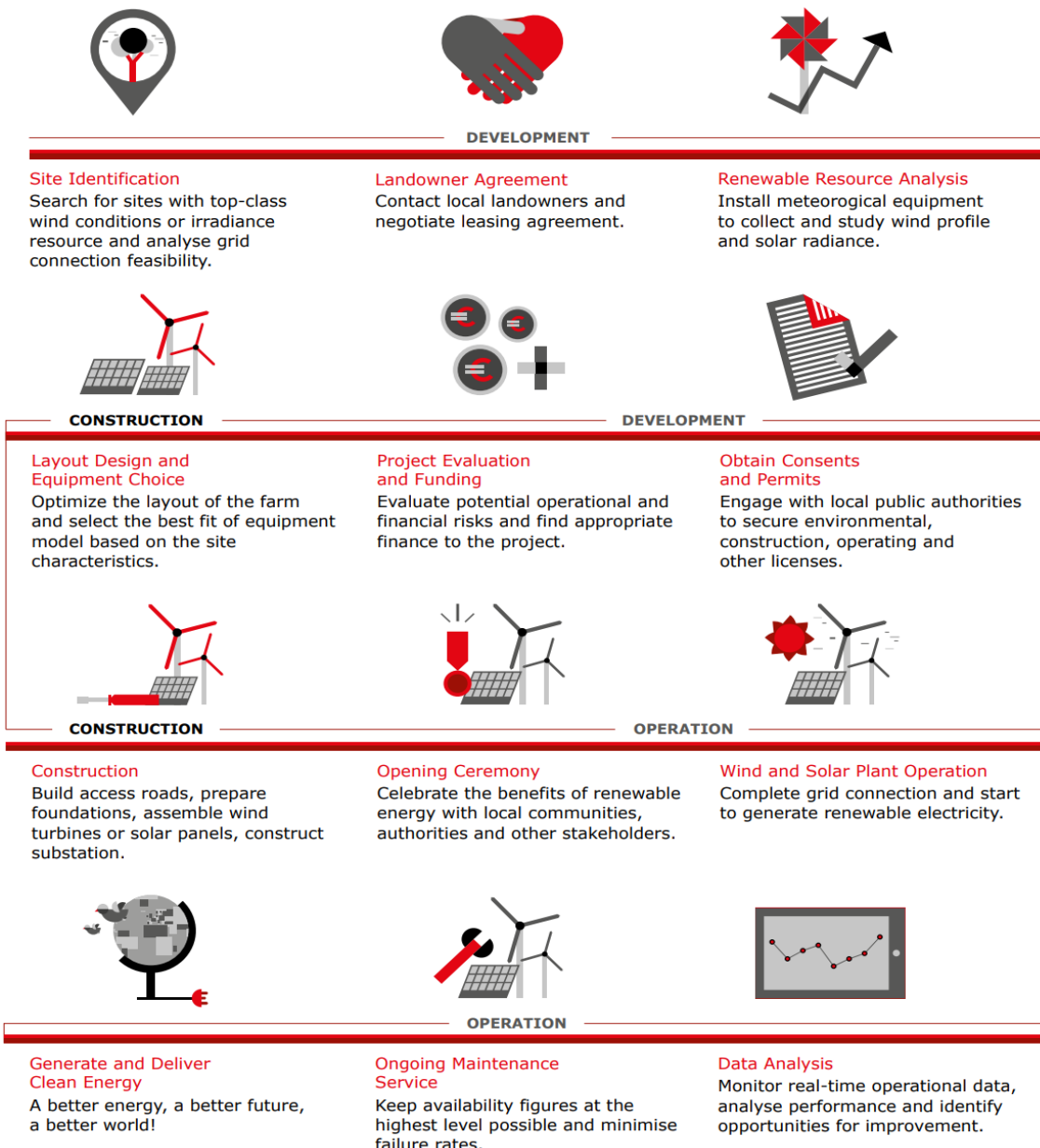
	# of Shares	Share Capital	Voting Rights
<b>Total number of shares</b>	872.308.162		
EDP	676.283.856	77,53%	77,54%
<b>Target Shares</b>	<b>196.024.306</b>	<b>22,47%</b>	<b>22,46%</b>
MFS	27.149.038	3,11%	3,11%

Please consider that MFS and its subsidiaries hold 4.07% of the total shares outstanding and 4.04% of the total voting rights of EDP Renováveis.

<sup>15</sup> In 2016, EDPR Europe (owned 100% by EDPR Group), EDPR North America (owned 100% by EDPR Group), EDPR Brazil (owned 55% by EDPR Group and 45% by Energias do Brasil, which is owned 65% by EDP).

**Exhibit 8 – Cost of Capital through the life cycle<sup>16</sup>**

**Source:** Morgan Stanley Research – Global Utilities, 2016

**Exhibit 9 – Value Creation Strategy**

**Source:** EDPR Annual Report 2016

<sup>16</sup> COD - Commercial Operation Date; SOC - Start of Construction

**Exhibit 10 – MFS Investment Management Open Letter**

21 April 2017

Dear Sirs, Mesdames

Massachusetts Financial Services Company and its investment management subsidiaries (collectively "MFS") are a global investment manager that makes investments on behalf of its clients, MFS is currently invested in EDPR on behalf of its clients and controls 35.5 million shares which represent 18.2% of the floated share base, 4.07% of the total shares outstanding and 4.04% of the total voting rights (as of 19 April 2017).

MFS is writing this open letter in response to the preliminary announcement made by EDP - Energias de Portugal, S.A, ("EDP") dated 27 March 2017 indicating its intention to launch a tender offer for the minority shares in EDPR which it does not own (the "Tender Offer"). In particular, MFS does not believe that the Tender Offer price of €6.80 per share indicated in the preliminary announcement represents fair value for minority shareholders, We would remind EDP that the Initial Public Offering price in June 2008 was €8 per share, We urge EDP to revise its Tender Offer price which should be materially higher based on our valuations of EDPR as we outline below, We believe the share price of EDPR has yet to recover from uncertainties surrounding US renewable policy in the recent presidential election. This short-term reaction does not reflect the long-term value and future prospects of EDPR's shares.

We also note that Mr João Manso Neto, the Chief Executive Officer of EDPR, is a member of the board of directors of EDP, in this regard, we would expect Mr. Neto to apply the highest standards of corporate governance in addressing any perceived or actual conflict of interest resulting from his dual capacity in relation to the Tender Offer and that he will be discharging his duties to EDPR faithfully.

**Metrics**

In our view, the fair value for the shares in EDPR should be based on two metrics: asset value and cash flow. These are the same two metrics that the management of EDPR has identified and consistently presented as relevant measures of the value of their underlying business.

Asset Value

MFS considers that asset value is one of two critical metrics to fairly value the shares of EDPR. This should be based on enterprise value per megawatt basis (EV / MW). This metric was supported by Mr. Neto as Chief Executive Officer of EDPR who stated the following on the results conference call held on 24 February 2016:

*"I would say that the best way of evaluating the assets is the price that we are being paid by them in megawatts in transactions, And I would say, if I want to value this company, I would look at the price that we are able to sell the assets."*

Since 2014, EDPR has sold seven assets at an average €1.5m / megawatt with recent transactions achieving €1.7m / MW. Based on EDPR's own market valuation presented to investors in March 2017 (a copy of the presentation is attached, see page 55), a value of €6.80 per share would imply an EV / MW of €1.08m per megawatt, a material discount to the average asset value of €1.5m per megawatt and the more recent €1.7m per megawatt. **Even applying the conservative metric of €1.5m per megawatt would result in the valuation of €11.73 per share, 73% higher than the Tender Offer price of €6.80 per share.**

In addition, we believe a fair price should also reflect the EDPR's considerable future pipeline opportunities: US renewable growth particularly in the commercial and industrial segments; two 500 MW French offshore projects with ENGIE as its partner; potential 1.1GW from the offshore wind project in the UK; and further development of EDPR's nascent solar platform.

The Tender Offer price of €6.80 represents €1.08 per megawatt which is a significant undervaluation of EDPR when compared to similar energy transactions where the majority shareholder bought out minority shareholders:

- In 2016, Enel SpA acquired the minority shares in Enel Green Power SpA at the EV/MW of €158m per megawatt
- In 2011, Iberdrola S.A acquired the minority shares in Iberdrola Renovables at the EV/MW of €1.32m per megawatt
- In 2011, EDF Group acquired the minority shares in EDF Energies Nouvelles at the EV/MW of €2.28m per megawatt

**Applying the average EV/ MW of these three transactions would result in €1.73m per megawatt and a valuation of EDPR at €14.05 per share.**

#### Cash Flow

There are two cash flow methodologies to value EDPR: Enterprise Value / EBITDA (EV / EBITDA) and Retained Cash Flow of ("RCF").

Using EV / EBITDA, we see that on a trailing twelve-month EBITDA basis, Enel SpA acquired Enel Green Power SpA at 10.8 times; Iberdrola S.A, acquired Iberdrola Renovables at 11.0 times; and EDF Group acquired EDF Energie Nourvelles at 13.2 times, at €6.80 per share, EDP is attempting to acquire EDPR at 10 times trailing EBITDA. **If EDPR were to apply the average trailing twelve month EBITDA multiple of these three minority acquisition transactions (11,7 times), EDPR would be worth €9.15 per share or a 35% premium to the €6.80 Tender Offer price.**

On EDPR's fourth quarter conference call in 2016 (the "2016 Q4 Call"), EDPR management spent a great deal of time focusing on RCF as their cash flow metric of choice, As depicted on page 18 of EPDR's March 2017 investor presentation slides, RCF is the "net cash flow generated by operations and available to re-invest, distribute and pay debt principal," The RCF metric "captures assets' cash generation capabilities and EDPR's ability to grow profitably," MFS agrees that RCF is a critical valuation metric as it most purely represents how much value is being driven by EDPR's management (as RCF represents EDPR's true cash generation).

In 2016, RCF was €698m (€0.80 cents/share) and EDPR management expects 10%-15% RCF growth in 2017 or €768-802m (€0.88-€0.92 cents/share, see page 33 of the March 2017 presentation). On page 34 of the March 2017 investor presentation slides, EDPR shows their RCF goal of €900m (€1.03/share) for 2020 and thus assumes only a 4.6% growth from the midpoint of 2017 guidance, It appears to us that this 2020 RCF guidance is quite low given the interest savings EDPR management has put into place subsequent to the May 2016 Analyst Day where this initial 2020 RCF guidance was put forth (early payoff in December 2016 of €364mm debt due 2018/19 bearing an interest cost of 7.7% which results in €28m interest saving – EDPR management mentioned a total interest savings of at least €40m from balance sheet restructuring in 2016 on the 2016 Q4 Call). In addition, this 2020 RCF goal only includes an additional 1.8GW in the US over this period (2016-2020) although EDPR has the potential to add an additional 1.3GW in the US as this amount has been 'Safe Harbor' secured (see page 29 of March 2017 investor



presentation slide), Thus, based on the lowered financial costs as well as upside in the US renewable opportunity, we believe this 2020 RCF estimate is too low but we will use it in our cash flow analysis.

At €6,80 per share, EDPR would be valued at 7.5 times the midpoint of EDPR's 2017 RCF guidance and 6,6 times EDPR's 2020 RCF guidance (which we believe is too low). At the proposed offer of €6.80 per share, EDPR would be trading at a 13.2% 2017 equity cash flow yield based on company guidance and a 15.1% 2020 equity cash flow yield. **These are significant undervaluations relative to EPDR's renewable and infrastructure peers.** In theory, EDPR could distribute 100% of this RCF if they stopped growing. That is not the case but this gives an indication of EDPR's capacity to generate strong cash flows and how a €6,80 per share price materially undervalues those cash flows.

For these reasons, MFS does not consider the Tender Offer price of €6.80 to represent fair value to minority shareholders of EDPR and strongly urge EDP to revise its offer. In the interest of transparency, MFS is also a shareholder in EDP. A copy of this letter is being made available to the board of EDPR.

Yours faithfully,

**Maura Shaughnessy**  
MFS Portfolio Manager

**Claud Davis**  
MFS Portfolio Manager

#### Exhibit 11 – EDP Renováveis' Board of Directors

Name	Position EDPR	Independence/Relations to EDP	Number of Shares	Intention regarding the Offer
António Luís Guerra Nunes Mexia	President of the Board of Directors	Chairman of EDP	4.200	Acceptance
João Manuel Manso Neto	Vice President and Chief Executive Officer	Executive Director of EDP	-	-
Nuno Pestana de Almeida Alves	Non-Executive Director	Executive Director of EDP	5.000	Acceptance
Miguel Dias Amaro	Executive Director	Non-Executive Director	25	Acceptance
Gabriel Alonso Imaz	Executive Director	Non-Executive Director	26.503	Acceptance
João Paulo Nogueira Costeira	Executive Director	Non-Executive Director	3.000	Acceptance
Manuel Menéndez Menéndez	Non-Executive Director	Non-Executive Director	-	-
João Lopes Raimundo	Non-Executive Director	Independent	840	Acceptance
João Manuel de Mello Franco	Non-Executive Director	Independent	380	Acceptance
Jorge Henriques dos Santos	Non-Executive Director	Independent	200	Acceptance
Gilles August	Non-Executive Director	Independent	-	-
Acácio Jaime Liberado Mota Piloto	Non-Executive Director	Independent	300	Acceptance
António do Pranto Nogueira Leite	Non-Executive Director	Independent	100	Acceptance
José António Ferreira Machado	Non-Executive Director	Independent	630	Acceptance
Allan J. Katz	Non-Executive Director	Independent	-	-
Francisca Guedes de Oliveira	Non-Executive Director	Independent	-	-
Francisco Seixas da Costa	Non-Executive Director	Independent	-	-

**Source:** EDPR Investor Relations

**Exhibit 12 – EDP's Takeover Price Premium**

	Date	Price	Premium (€6.75)	Premium (€6.80)
Consideration to be Paid	27-03-2017	6,75 €		
Offered Consideration	27-03-2017	6,80 €		
Dividend Payment	08-05-2017	0,05 €		
Closing Price before the Announcement Date	24-03-2017	6,20 €	8,9%	9,7%
Volume weighted Average Price Since IPO		5,20 €	29,8%	30,8%
IPO	04-06-2008	8,00 €	-15,6%	-15,0%

**Source:** Prospectus for EDP Renováveis

**Exhibit 13 – Analysts target share price for EDPR at 27-03-2017**

	Date	Recommendation	Price per share	Premium over Takeover price
<b>EDP</b>	<b>27-03-2017</b>	<b>-</b>	<b>6,75 €</b>	<b>-</b>
BBVA	23-03-2017	Outperform	7,25 €	7,41%
BIG	21-03-2017	Buy	7,40 €	9,63%
Grupo Santander	20-03-2017	Buy	7,80 €	15,56%
Exane BNP Paribas	20-03-2017	Neutral	6,40 €	-5,19%
BPI	16-03-2017	Neutral	8,15 €	20,74%
Morgan Stanley	14-03-2017	Overweight	8,10 €	20,00%
Intermoney	08-03-2017	Neutral	6,40 €	-5,19%
Haitong	07-03-2017	Buy	7,90 €	17,04%
Kepler Cheuvreux	01-03-2017	Buy	7,70 €	14,07%
Macquarie	01-03-2017	Neutral	5,90 €	-12,59%
Natixis	01-03-2017	Neutral	6,90 €	2,22%
Bryan Garnier & Cie	01-03-2017	Neutral	6,30 €	-6,67%
Bank of America	01-03-2017	Buy	7,70 €	14,07%
Caixa BI	28-02-2017	Buy	7,60 €	12,59%
Banco Sabadell	27-02-2017	Buy	8,20 €	21,48%
Deutsche Bank	27-02-2017	Buy	7,60 €	12,59%
Berenberg	07-02-2017	Sell	4,50 €	-33,33%
HSBC	25-01-2017	Buy	7,50 €	11,11%
Société Générale	19-01-2017	Hold	6,30 €	-6,67%
UBS	19-01-2017	Buy	8,00 €	18,52%
Goldman Sachs	13-01-2017	Neutral	6,00 €	-11,11%
J.P. Morgan	20-12-2016	Overweight	6,70 €	-0,74%
Citi	12-12-2016	Neutral	6,50 €	-3,70%
RBC	03-11-2016	Outperform	8,00 €	18,52%
Axia Ventures	02-11-2016	Buy	8,30 €	22,96%
<b>Minimum</b>			<b>4,50 €</b>	<b>-33,3%</b>
<b>Average</b>			<b>7,16 €</b>	<b>6,1%</b>
<b>Median</b>			<b>7,50 €</b>	<b>11,1%</b>
<b>Maximum</b>			<b>8,30 €</b>	<b>23,0%</b>

**Source:** Prospectus for EDP Renováveis, Bloomberg<sup>17</sup>

<sup>17</sup> Considering the €6.75 offered per share.

**Exhibit 14 – Comparable Offers**

Announcement Date	Target Company	Acquirer	Offered Consideration	Price one Day before the Preliminary offer	Premium	EV/MW	Liquidity
08-03-2011	Iberdrola Renovables	Iberdrola	3,03 €	2,71 €	11,8%	1,43	131,4%
08-04-2011	EDF Energies Nouvelles	EDF	40,00 €	36,64 €	9,2%	1,92	56,5%
18-11-2015	Enel Green Power	Enel	2,05 €	2,01 €	2,0%	1,83	114,8%
27-03-2017	EDP Renováveis	EDP	6,75 €	6,20 €	8,9%	1,08	35,8%

**Source:** Prospectus for EDP Renováveis<sup>18</sup>

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<sup>18</sup> Liquidity refers to the percentage of total number of shares traded during the last 6 months relative to the free-float.



## Teaching Note

### Synopsis

EDP Renováveis (EDPR) is a worldwide renewables company, whose major shareholder is Energias de Portugal (EDP). In order to produce and deliver clean electricity, EDPR business covers the development, construction and operation of both solar plants and wind farms (onshore and offshore).

This case presents a realistic situation in which EDP announces a Tender offer to regain full control of its most important subsidiary, EDP Renováveis. EDP carved-out EDPR in 2008 through an IPO and in 2017, the company announced it would buyback all the minority stakes of the company with the ultimate goal of delist EDPR from Lisbon's Stock Exchange.

However, the deal amount offered by EDP had the inherent risk of being rejected by the most relevant minority shareholders, such as Massachusetts Financial Services (MFS) representing the biggest threat for EDP Tender's success.

This case presents a hypothetical situation of a small shareholder representing an Asset Management company that is involved in the valuation battle of the two most important shareholders of EDPR (EDP and MFS) and must decide if he should sell the fund's shares.

This case shows the background and history of both EDP and EDPR since the EDPR's IPO (2008), allowing a student to better understand the notions of market timing strategies, valuation under specific market conditions. The ultimate objective of this case study is to lead students to perform a decision on whether the protagonist of this case should sell or not the shares during the Tender. It is very important to consider all the possible consequences of such decision. Regarding the valuation computations inherent to this case study, it lodges a good example of the subjectivity of technical valuation due to its dependence on the available and public information.

This case should be taught over a class with no more than one hour and a half. Due to its specifications, it was designed for Applied Corporate Finance and M&A courses.

### Key words

Equity carve-out; Green Bubble; Market Timing; Buyback; Compulsory Acquisition.

### Suggested Questions

1. Comment EDPR's shareholder structure, financial policy and value creation strategy.
2. What were the reasons for EDPR's equity carve-out and IPO? Were the particular conditions of the stock market for renewables industry a potential reason for such transaction?
3. Please discuss the terms of EDP's offer to take EDPR private. From Mr. Nuno point of view, what are the pros and cons of this offer?
4. Considering your two previous answers, do you believe EDP is taking advantage of market conditions to sell and later buyback EDPR? Is it a matter of market timing?
5. Is EDP really undervaluing EDPR? Is EDP buying at discount taking advantage of a liquidity discount? Is it a fair price? On the sell side what do you agree or not with the valuation proposed by MFS?
6. What options do EDPR Shareholders have? What are the pros and cons of each? What is your recommendation for EDPR's shareholders?
7. Analyse the composition of the two companies' boards. Can you spot any potential conflicts of interest? How could have them be minimised?

### Case Analysis

#### **Comment EDPR's shareholder structure, financial policy and value creation strategy.**

EDP Renováveis is a renewable energy company, expert in the in the development, construction and operation of both wind farms and solar plants. Before the Tender Offer, EDP Group controlled 77.5% of EDPR share capital and voting rights. Excluding the shares held by EDP, the MFS Investment Management and its subsidiaries controlled 4.07% of the total shares outstanding and 4.04% of the total voting rights, corresponding to 18.23% of the floated share base.

The company operates in many different countries worldwide and, consequently, each country has its specific regulation system, remuneration licences and operation incentives. However, the value creation strategy of EDPR is similar among all the countries.

During the last 5 years, EDPR has been developing self-funding strategies in order to fund growth and becoming increasingly independent from EDP. These strategies are designed to get the most out of EDPR's assets through Asset Rotation and Retained Cash Flow. In 2016, EDPR indicated a dividend pay-out ratio ranging from 25-35% of its annual net profit. In the same year dividends paid amounted €44 million corresponding to 25% of its net profit allowing the company to use the remaining 75% to partially fund growth.

Moreover, it is very important to understand how EDPR is creating value and funding growth through its Asset Rotation strategy. A typical project englobes three different phases: development, construction and operation. However, the first and second phase represent the riskiest steps of the value creation process as the main risk on a renewable energy plant comes from its construction, connection to transmission grids and all the estimations required during the development phase. As mentioned in the case, finding sites that have good conditions in terms of sun or wind that would allow farms to operate at high load factors is a critical step requiring good technical capabilities. Furthermore, one of the most difficult steps is to guarantee all the necessary

licenses and permits from the regulatory authorities as well as the government support through a feed-in-tariff or tax benefits.

Once a wind farm becomes operational, the risk of the project comes down materially, and its operating cash flow stream tends to be quite stable over the life time of the project, as the company knows already the remuneration of the project due to the government support mentioned above. Therefore, an investor that is willing to invest in a project in the operation phase will certainly demand a lower return than what EDPR would accept initially to develop and build the wind farm. The asset rotation strategy allows EDPR to crystallize the value of the investment made for investors and invest this capital gains in new projects.

Thus, before a project becomes operational, EDPR typically sells a minority stake of 49% of the project or SPV in order to keep control of the project and free up capital for further investments, contributing to EDPR's self-funding growth strategy.

Even though the development and construction are the riskiest phases, there are also operational risks that must be considered by an investor during the operation phase (**Exhibit 1**). It is very important to consider the risk resulting from inadequate or failed internal processes, systems and technology and external events, such as an unexpected increasing in operational & maintenance costs or natural disasters. It is also important to consider that the amount of electricity generated is dependent on weather conditions, which vary across seasons and locations. Thus, even though EDPR studied each site during the development phase, the uncertainty regarding weather conditions should be considered. In addition, despite most plants sell electricity under Power Purchasing Agreements (PPA) or tariffs, the small portion that is sold with merchant exposure, is hedged by the EDPR's risk department.

Regarding EDPR's future perspectives, even though both value creation process and financial policy of EDPR are stable and well defined, there are some concerns regarding the storage issue. Undoubtedly, in 2016, this became the main challenge for renewables industry and consequently for EDP Renováveis.

**What were the reasons for EDPR's equity carve-out and IPO? Were the particular conditions of the stock market for that industry a potential reason for such transaction?**

EDP Renováveis started as a small renewables division of EDP. However, this small division has been growing since its inception, mainly through inorganic growth. Many M&A transactions allowed EDPR to become a leading renewables company in Europe. It is important to highlight the acquisition of Horizon Wind Energy in the U.S, in 2007, which allowed EDPR to separate its business from EDP and at the same time, start its operation in the United States.

Hence, in order to get this leading position and provide better visibility to its investments, EDP's Board of Directors thought that by listing EDPR, it would be easier to increase its financial capability and, consequently, its ability to acquire assets. In addition, the IPO proceeds, allowed EDP to fund growth opportunities of EDPR, allowing the company to meet its target of 10.5 GW of installed capacity by 2012.

Nevertheless, despite EDPR looked-for increase its independence from the parent company, EDP, the latter did not want to lose total control of EDPR neither change its management. Thus, the equity carve-out looked like the best option for EDP's shareholders. Many CEOs consider equity

carve-outs as an opportunity to “increase the company’s stock price without sacrificing control of a valuable business unit.”<sup>19</sup>

Therefore, in 2007, EDP’s Board of Directors decided to carve-out its main subsidiary through an IPO at *NYSE Euronext Lisbon*. It was the biggest IPO in Europe, nonetheless, EDP’s stock price did not increase as expected.

Regarding the market conditions at the time of the IPO, it was expected that long term trends in the beginning of the XXI century could favour innovative green companies like EDPR as concerns about energy resources and the environment were growing. The renewables industry became one of the fastest growing and profitable industries in world as more investors were investing in this sector and therefore, more capital was being allocated into the renewables industry. Therefore, as it is possible to observe, the renewables index was outperforming two of the most relevant indexes in the world, and thus, 2007 looked like the perfect time for EDPR’s Initial Public Offering.

In addition, EDP’s main competitors had already launched their renewables subsidiaries in the market during the Green Bubble. Therefore, the economic and financial situation lived in 2008 allowed EDP to take advantage of that bubble and to introduce its main subsidiary in the market.

**Please discuss the terms of EDP’s offer to take EDPR private. From Mr. Nuno point of view, what are the pros and cons of this offer?**

During 2016, EDP started to change its portfolio of companies by selling its gas operators and focusing on production and distribution of electricity. Renewables projects have higher returns than gas operators and are typically owned by a Special Purpose Vehicle (SPV), which allows EDP to protect itself from the debt raised for each project. Therefore, these changes in EDP’s portfolio allowed the company to sell its assets with lower profitability levels and invest in assets that are more profitable, such as, renewable energy assets.

Furthermore, these asset sales allowed EDP to reduce its debt levels and to finance EDPR takeover, as well as to consolidate EDPR after de acquisition. EDP wanted to focus in the electricity generation sector through renewable energy as EDP believed that growth opportunities in the renewables industry would arise in the future.

Moreover, in late 2016 and in the beginning of 2017, there was an increased use of electricity in transportation and development of infrastructure. So, according with the international agreed targets, EDP was expecting an increase in demand for renewable energy and therefore it would be necessary to meet demand requirements.

Hence, on March 27, 2017, EDP announced that it would offer to purchase all the minority stakes of EDP Renováveis at €6.80 per share fully paid in cash and the results of the offer would be announced on August 4, 2017. The ultimate goal of EDP was to have full control of its subsidiary and to delist EDPR from the stock market.

Therefore, in order to achieve this result, EDP needed to acquire 90% of the share capital of EDPR and at least 90% of the voting rights corresponding to the share capital of EDPR. If EDP acquires at least 90% of the share capital of EDPR and at least 90% of the shares encompassed by the offer,

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<sup>19</sup> Annema, André, Fallon, William C., Goedhart, Marc H. 2001. “Do carve-outs make sense?” in McKinsey

the Portuguese company might consider the exercise of a squeeze-out right and launch a Compulsory acquisition. This action will force all the minority shareholders that did not sell their shares during the Tender Offer to do it now. Also, the exercise of a sell-out right should be considered to give an opportunity to all minority shareholders to sell their shares. If EDP acquired at least 90% of the voting rights relative to the share capital of EDPR, it would be possible to request to CMVM the delisting of the shares of EDPR from the *Euronext Lisbon*.

From Mr. Nuno perspective, this offer could be an excellent opportunity to take advantage of an exceptional liquidity event and to obtain a premium of 8.9% relative to the share price on the day before the announcement date. On the other hand, Mr. Pimentel could be interested in owning the stock for the long term as investing in EDPR is an excellent way to invest in a global renewables player with a strong management team. In this case, this exceptional liquidity event would not represent an advantage for Mr. Pimentel and the amount offered might not be fair from his perspective.

**Considering your two previous answers, do you believe EDP is taking advantage of market conditions to sell and later buyback EDPR? Is it a matter of market timing?**

Considering the market conditions at the time of EDPR equity carve-out, it is possible to understand that EDP took advantage of market valuations for renewables companies. As mentioned before, a lot of capital was moving towards this sector and investors were overvaluing these companies. In other words, in 2008, EDPR was more valuable to the market than it was for EDP, and therefore, the parent company took advantage of it. However, when the market is no longer overvaluing the renewable company anymore, EDP would buy back by a cheaper price than it sold.

Furthermore, future perspectives for the renewables industry and the consolidation and integration of the activities of EDP and EDPR thought a cross-border merger would be benefiting for both companies.

Thus, 9 years later, EDP found this opportunity and announced the offer. Indeed, even though market timing strategies are very difficult to predict, this case might be a reference of a successfully strategic finance plan. Sell when the company is overvalued and buy when the company is undervalued seems to be a market timing strategy which gives EDP the title of an expert at buying low after selling high.

Furthermore, it is fundamental to consider what EDP's main competitors did with their most relevant subsidiaries, previously launched in the stock market during the Green Bubble. Iberdrola from Spain, EDF from France and the Italian company, Enel, have all delisted and consolidated their renewable energy subsidiaries years before the EDP's Tender offer, leaving EDPR as the only major listed pure-play renewables company in the utilities industry (**Exhibit 2**).

This fact, could create valuation problems for investors and for EDPR. After the consolidating the subsidiaries of EDP's main competitors, the public information of the most relevant comparables for EDP Renováveis became unavailable, and consequently, it would be much more difficult to find adequate peers for EDPR.

Moreover, at the time of the offer, EDP Renováveis was being traded at a lower liquidity levels when compared with the subsidiaries of EDP's main competitors, years before. It means that, the volume of trading of EDPR's stock was much lower than the volume of trading of its peers, before



they merged with their parent companies. Consequently, EDP could also take advantage of such low liquidity levels and buy for a cheaper value, reinforcing the idea of timing.

Thus, even though EDP wanted to simplify its Equity story by concentrating its presence in the capital markets solely through EDP's stock, the parent company has been performing as a strategic player in the financial markets. EDP has been considering its internal conditions, competitive advantages, and consequently taking advantage of favour market conditions.

**Is EDP really undervaluing EDPR? Is EDP buying at discount taking advantage of a liquidity discount? Is it a fair price? On the sell side what do you agree or not with the valuation proposed by MFS?**

Tender offers require shareholders to determine how much the company is worth. In this case, one should note that asset valuation based on private information is completely different from valuations based on public information. Nonetheless, even though all EDPR shareholders have access to same private information, EDP has privilege information since the EDPR management team is composed by members that are also Executive Directors of EDP. In addition, it is also important to note that a company may be valued at a premium or discount depending on all relevant measures that are not included in the financial statements of the company, such as its market position, competitive advantages and liquidity levels.

In the renewables industry, it is completely different to value a company based on private or public information. If private information is available, it is easy to compute a sum of parts through a Discounted Cash Flow of each wind farm, solar plant or SPV. Renewable projects have huge initial capital expenditures and then stable cash flows for 15-20 years from the Commencement Operation Date (COD). However, if only public information is available, the multiples valuation seems to be the only possible method, despite all the assumptions inherent to this methodology.

Despite MFS' multiples valuation based on MW, it is important to understand that this method does not represent an accurate valuation technique. In this industry, considering the value creation process, the transaction prices depend on many other factors than just capacity. Hence, metrics such as the age of the assets, operating costs, local wind conditions, operating efficiency, power price agreements, local tax rules, subsidies and financing, have a major influence in the transaction price<sup>20</sup>. For instance, the EV/MW multiple includes exclusively assets that are operational, generating cash flows and their respective costs, which is not comparable with the cost structure of the EDPR group<sup>21</sup>.

In addition, the regulatory system and the government support are completely different among countries. Therefore, the value per MW of an asset in Portugal is different from the value of the same asset in the United States. Also, based on multiples valuation, one is assuming that assets will operate in perpetuity, which is completely wrong in this case of renewables projects. Thus, when considering the operating life of a farm and the period that a tariff is guaranteed, one should

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<sup>20</sup> "A market approach for valuing wind farm assets Global results". 2016 in Deloitte

<sup>21</sup> EDPR group structure costs include "costs with the top management team, business development, human resources, central planning service, control and accounting, information technology, R&D" – Prospectus for EDPR

also note that these factors vary among renewable energy farms and, once more, are dependent on the country in which the operating farm is installed.

Furthermore, wind farms and solar plants have different characteristics, which requires different valuations and consequently different multiples. In addition, offshore wind farm assets differ from onshore wind farm assets. Thus, assuming a target multiple for EDPR based on comparable companies with different proportions of solar and wind projects from EDPR, reinforces the fact that this method does not represent an accurate valuation technique.

In order to figure out if EDP is undervaluing EDPR when computing EV/EBITDA and EV/MW multiples some EDPR's peers were considered. To analyse similar precedent transactions, *Iberdrola*, *EDF* and *Enel* were selected as they bought back their renewables subsidiaries and their average EV/MW multiple was €1.73m /MW (**Exhibit 2**).

Moreover, since 2012, EDPR has been selling its assets at an average €1.5m /MW and the last 4 transactions presented in the prospectus achieved €1.7m /MW. Comparing both EV/MW from similar precedent transactions and EDPR's recent divestments, it is possible to conclude that EDP is valuing EDPR at substantially lower amount per MW as the multiple correspondent to the offer is €1.08m /MW (**Exhibit 3**).

Moreover, to compute the EV/EBITDA multiple of EDPR's peers, *Acciona*, *Iberdrola*, *Enel*, *Dong Energy*, *Nextera* and *ERG* were select. These peers were selected based on multiples valuation performed by both sell and buy sides (EDP and MFS), and information of fiscal year 2016 was considered (**Exhibit 4**). It is important to highlight that MFS's portfolio managers mentioned that EDP considered some peers that MFS does not know, even though the American fund has been operating in this business for 30 years. Thus, one may note how valuations might be manipulated due to subjective assumptions, giving a good example that valuation is not exact science.

As mentioned in the previous question, considering the amount offered by EDP, the offer consideration of €6.80 per share and the Consideration to be paid represent a premium of 9.7% and 8.9%, respectively, relative to the closing price of the shares on the day before the preliminary announcement. Indeed, an easy way to analyse the attractiveness of this offer is by comparing the premium EDPR's shareholders would obtain, with the average 7.7% premium paid in the recent comparables transactions. Thus, one may conclude that EDP is paying a higher premium.

However, based on an analysis performed by Deloitte, the 95% confidence interval for the EV/MW multiple of an onshore wind project varies between 1.6x and 1.7x, in millions (**Exhibit 5**). For an offshore project, this multiple ranges between 4.1x and 5.0x, in millions. The same multiple for solar plants is between 1.4x and 1.7x, in millions, with a 95% degree of certainty (**Exhibit 6**). These values allow minority shareholders to understand that €1.08m /MW given by EDP is significantly below the lower bound of the expected ranges.

This lower amount offered by EDP might be due to EDPR's shares historical liquidity level of 35.8% which is the lowest among the peers used. Moreover, this level is clearly below the average of 100.9% of the average liquidity levels. Therefore, EDP might be taking advantage of a liquidity discount and, giving to shareholders an extraordinary liquidity event.

Assuming EDPR performs in the median of its comparable companies, a football field was computed based on these 4 multiples mentioned above. The EV/MW of precedent similar transactions, EV/MW of divestments made by EDPR, 2016 EV/EBITDA multiple of EDPR's

peers and EV/EBITDA correspondent to precedent similar transactions. The share price obtained is €10.63 per share, 57% higher than the consideration to be paid (€6.75 per share) (**Exhibit 7**).

**What options do EDPR Shareholders have? What are the pros and cons of each? What is your recommendation for EDPR's shareholders?**

EDPR's minority shareholders, representing 22.47% of the share capital will have to decide the future of their shares. Thus, sell or not to sell is the main issue for each minority shareholder.

If they sell, they will have capital gains, obtaining a premium of 8.9% comparing to the share price on the day before the announcement date. If they retain their shares in order to obtain a higher price, there are three possible scenarios, depending on the number of shares bought by EDP in the offer.

**Scenario 1:**

- EDP holds at least 90% of the shares representative of the share capital of EDPR and acquires at least 90% of the shares encompassed in the offer
  - EDP launches a compulsory acquisition to exclude all the minority shareholders (squeeze-out and sell-out right) and the amount paid should be equal to the consideration offered in the Tender offer.
- EDP holds more than 90% of the voting rights corresponding to EDPR's share capital.
  - EDP might consider the possibility to request *Euronext Lisbon* to delist the shares of EDPR from the stock market and the amount paid should be equal to the consideration offered in the Tender offer.

If this scenario occurs, the offer ends successfully and all the minority shareholders will be forced to sell their shares obtaining a premium of 8.9% comparing to the share price on the day before the announcement date. From Mr. Nuno Pimentel's perspective, if he did not want to sell the fund's shares, he will be forced to do it. Although he might receive a premium, he will lose a long-term position at EDPR.

**Scenario 2:**

- EDP holds less than 90% of the shares representative of the share capital of EDPR or does not acquire more than 90% of the shares encompassed by the offer.
  - Both the squeeze-out and sell-out rights are not applicable and, consequently, EDP is not able to force the remaining shareholders to sell their positions.
  - EDP might not launch another takeover for the remaining shareholders and consequently they would lose their liquidity (assuming EDP bought shares during the offer period).
- EDP holds more than 90% of the voting rights corresponding to EDPR's share capital
  - EDP might consider the possibility to request *Euronext Lisbon* to delist of the shares of EDPR from the stock market

This is the worst scenario for all the minority shareholders that did not sell their shares. Under this scenario EDP is not able to force the remaining shareholder to sell their positions and the parent company might not request the immediate delist of EDPR's from the stock market. Therefore, if Mr. Pimentel did not sell his Fund's shares, he should be worried as the free-float amount will be significantly reduced which would imply further liquidity discount. There are no

pros from his perspective as he did not accept the amount offered by EDP and after the offer period he probably could sell the fund's shares by a lower amount.

Scenario 3:

- EDP holds less than 90% of the shares representative of the share capital of EDPR.
- EDP holds less than 90% of the voting rights corresponding to EDPR's share capital
- Thus, minority shareholders should wait for further actions from EDP.
  - EDP could increase the amount offered per share and there might be more capital gains comparing with the previous price of €6.75 per share.
  - EDP does nothing and therefore minority shareholder still hold their shares.
  - EDP merges with EDPR as all the required permits are allowed.

In this case, if Mr. Nuno disagreed with the amount offered by EDP in the Tender, this might be the best scenario if EDP does nothing or increases the amount offered per share. However, if EDP merges with EDPR, the uncertainty regarding the amount to be received will worry Mr. Pimentel.

After considering these three scenarios it is also very important to consider the Open Letter written by MFS' Portfolio Managers. They mentioned that they will not sell their equity position of EDPR and therefore, if their position holds, the offer would not be successful since it would not be possible for EDP to buy 90% of the shares encompassed by the offer and consequently, both the squeeze-out and sell-out right are not applicable.

Nonetheless, Mr. Pimentel could receive the same amount as CMVM ruled that in case EDP requests the delisting of the shares from the stock market Euronext Lisbon, EDP shall maintain a permanent purchase order of EDPR's shares with the same conditions as the Tender Offer. However, this request might not happen immediately and therefore Mr. Pimentel could "lose" all his stake of EDPR due to the low liquidity levels presented on this scenario.

Although the price offered by EDP was low and MFS has the future of both squeeze-out and sell-out rights in its hands, the best advice for Mr. Nuno Pimentel would be to sell the Fund's shares. As a small shareholder with limited power, Mr. Pimentel has no power to influence the success of the offer neither to influence EDP to increase the amount offered per share. Therefore, Mr. Pimentel could believe that the risk he is facing if he does not sell is too high when compared to the return he might has.

**Analyse the composition of the two companies' boards. Can you spot any potential conflicts of interest? How could have them be minimised?**

Minority shareholders have many concerns regarding the independent fairness amount offered by EDP, considering the inherent conflicts of interest between the Board of Directors of both companies. In this case, management of EDPR is undoubtedly aligned with EDP and is willing to accept the Tender amount offered by EDP. Therefore, for many minority shareholders this alignment would not be a good evidence.

Minority shareholders, such as MFS and Ecofin<sup>22</sup> asked EDP to revise the Tender's price, which accordingly with news, would not be successful, as Mr. António Mexia stated that EDP would not increase the amount offered per share.

*"We also note that Mr João Manso Neto, the Chief Executive Officer of EDPR, is a member of the board of directors of EDP, in this regard, we would expect Mr. Neto to apply the highest standards of corporate governance in addressing any perceived or actual conflict of interest resulting from his dual capacity in relation to the Tender Offer and that he will be discharging his duties to EDPR faithfully."*<sup>23</sup>

Messrs. António Mexia, Nuno Pestana de Almeida Alves and João Manso Neto are members of EDP's Executive Board of Directors and members of the management board of EDP Renováveis simultaneously. Thus, since these members are involved in a conflict of interest, they should not attend, participate or vote in any subject related to the offer. This includes, both Board of Directors' meetings and any other decision-making department or committee. Consequently, a special Committee should be created in order to discuss all these subjects related to the Offer.

In this specific case, it is possible to observe that 60% of the independent board members of EDPR are in favour of the offer which might be more difficult to EDPR's minority shareholders to encourage the remaining shareholders to hold their shares and ask EDP to increase the amount offered per share.

## Conclusions

During the offer period, EDP acquired 5.1% stake of EDPR. Therefore, at the end of the period, EDP increased its equity stake of EDPR to 82.6% (**Exhibit 8**). Thus, considering Question 6, EDP and all the minority shareholders of EDPR ended up under the third scenario. EDP is not able to launch a compulsory acquisition neither to request CMVM to delist EDPR shares from the stock market. Therefore, as a minority shareholder, one should wait for further actions of EDP.

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<sup>22</sup> Ecofin is a leading independent investment management firm which specializes in infrastructure and the transition to a more energy efficient economy, globally.

<sup>23</sup> MFS's open letter to EDP's Board of Directors

**Exhibit 1 – Value creation risks**

Risk Categories		Risk Groups	
<b>Market Risks</b>	<p>It refers to the risk to EDPR resulting from movements in market prices. Due to the relationship between wind production and electricity price production risk is considered within market risk.</p> <p>In particular, market risks are changes in electricity prices, production risk, interest rates, foreign exchange rates and other commodity prices.</p>	Electricity Price Risk	Inflation Risk
		Interest Rate Risk	Liquidity Risk
		Exchange Rate Risk	Commodity Price Risk
		Electricity Production Risk	
<b>Counterparty Risk</b>	<p>Risk that counterparty to a transaction could default before final settlement of the transaction's cash flows. A direct economic loss would occur if transactions with the counterparty had positive economic value at the time of default. Even in the case of not defaulting, it may not comply with its contract obligations (timing, quality, etc.), implying additional higher costs due to its replacement or to delays in fulfilling the contract.</p>	Counterparty Credit Risk	
		Counterparty Operational Risk	
<b>Operational Risk</b>	<p>Defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events (such as an increase in equipment default rates, increasing O&amp;M, or natural disasters).</p>	Development Risk	Legal Claims Risk (Compliance)
		Execution Risk	Personnel Risk
		Operation Risk (damage to Physical Assets and Equip. Performance)	Processes Risk
		Information Technologies Risk	
<b>Business Risk</b>	<p>Potential loss in the company's earnings due to adverse changes in business margins. Such losses can result, above all, from a serious increase in equipment prices or changes in the regulatory environment. Changes in electricity prices and wind production are considered market risks.</p>	Energy Production Risk	Wind Turbine Price Risk
		Equipment Performance Risk	Wind Turbine Supply Risk
		Regulatory Risk (renewables)	
<b>Strategic Risk</b>	<p>It refers to risks coming from macroeconomic, political, social or environmental situation in countries where EDPR is present, as well as those coming from a change in competitive landscape, from technology disruptions, from changes in energy markets or from governance decisions (investment decisions criteria, Corporate Governance and Reputational issues).</p>	Country Risk	Invest. Decisions Criteria Risk
		Competitive Landscape Risk	Reputational Risk
		Technology Disruptions Risk	Meteorological Changes
		Corp. Organization and Governance	Energy Planning

Source: EDPR annual report 2016

**Exhibit 2 – Comparables precedent buybacks**

Announcement Date	Target Company	Acquirer	Offered Consideration	Price one Day before the Preliminary offer	Premium	EV/EBITDA	EV/MW	Liquidity
08-03-2011	Iberdrola Renovables	Iberdrola	3,03 €	2,71 €	11,8%	12,58x	1,43x	131,4%
08-04-2011	EDF Energies Nouvelles	EDF	40,00 €	36,64 €	9,2%	13,13x	1,92x	56,5%
18-11-2015	Enel Green Power	Enel	2,05 €	2,01 €	2,0%	10,47x	1,83x	114,8%
<b>Average</b>					<b>7,7%</b>	<b>12,06x</b>	<b>1,73x</b>	<b>100,9%</b>
27-03-2017	EDP Renováveis	EDP	6,75 €	6,20 €	8,9%	9,61x	1,08x	35,8%
			6,80 €		9,7%	9,65x	1,09x	

\*EV/MW multiple is in million

Source: Prospectus for EDP Renováveis

**Exhibit 3 – EDPR's precedent divestments (EUR)**

Transaction Date	Country	Buyer	Acquired Share	MWs	EV/MW
Nov 2012	USA	Borealis Infrastructure	49,0%	599	1,0x
Jun 2013	Portugal	CTG	49,0%	644	1,6x
Sep 2013	USA	Fiera Axiom Infrastructure	49,0%	97	0,8x
Oct 2013	France	Axpo	49,0%	100	1,3x
Aug 2014	USA	Fiera Axiom Infrastructure	36,0%	1.101	1,1x
Oct 2014	France	EFG Hermes	49,0%	270	1,3x
Nov 2014	Canada	Northleaf Capital Partners	49,0%	30	2,3x
Dec 2014	Brazil	CTG	49,0%	321	1,5x
Nov 2015	USA	Fiera Axiom Infrastructure	34,0%	1.002	1,6x
Dec 2015	Italy and Poland	CTG	49,0%	598	1,7x
Apr 2016	Belgium	EFG Hermes	49,0%	664	1,7x
Feb 2017	Portugal	CTG	49,0%	422	1,7x
<b>Minimum</b>					<b>0,8x</b>
<b>Average</b>					<b>1,5x</b>
<b>Median</b>					<b>1,6x</b>
<b>Maximum</b>					<b>2,3x</b>

\*EV/MW multiples are in million

Source: Prospectus for EDP Renováveis

**Exhibit 4 – EDPR's comparables (million EUR)<sup>24</sup>**

Name	Mkt Cap	EBITDA	Min Int	Oth Non-Cash Adj	Net Debt	Shares Out	EV	EV/EBITDA
EDP Renováveis	5.265	1.171	1.448	11	2.803	872,308	9.527	8,14x
Acciona	4.004	1.881	266	-584	5.109	57,260	8.795	7,00x
Iberdrola	39.661	7.917	3.446	-443	29.144	417,726	71.808	9,07x
Enel	42.578	15.276	17.772	260	42.990	30,600	103.600	6,78x
Orsted	15.130	2.272	692	134	635	142,804	16.590	7,30x
Nextera	54.284	7.219	939	173	28.016	290,954	83.411	11,56x
ERG	1.533	451	0	-29	1.666	6.230,656	3.171	7,03x

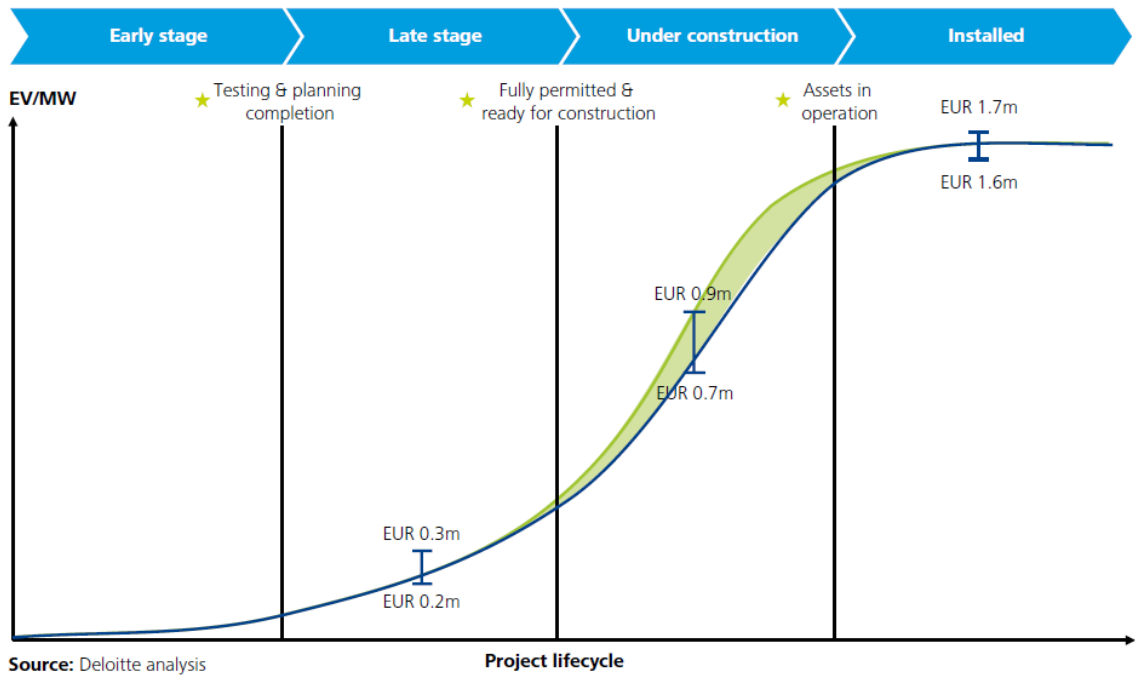
\*Shares outstanding are in millions

\*FY 2016

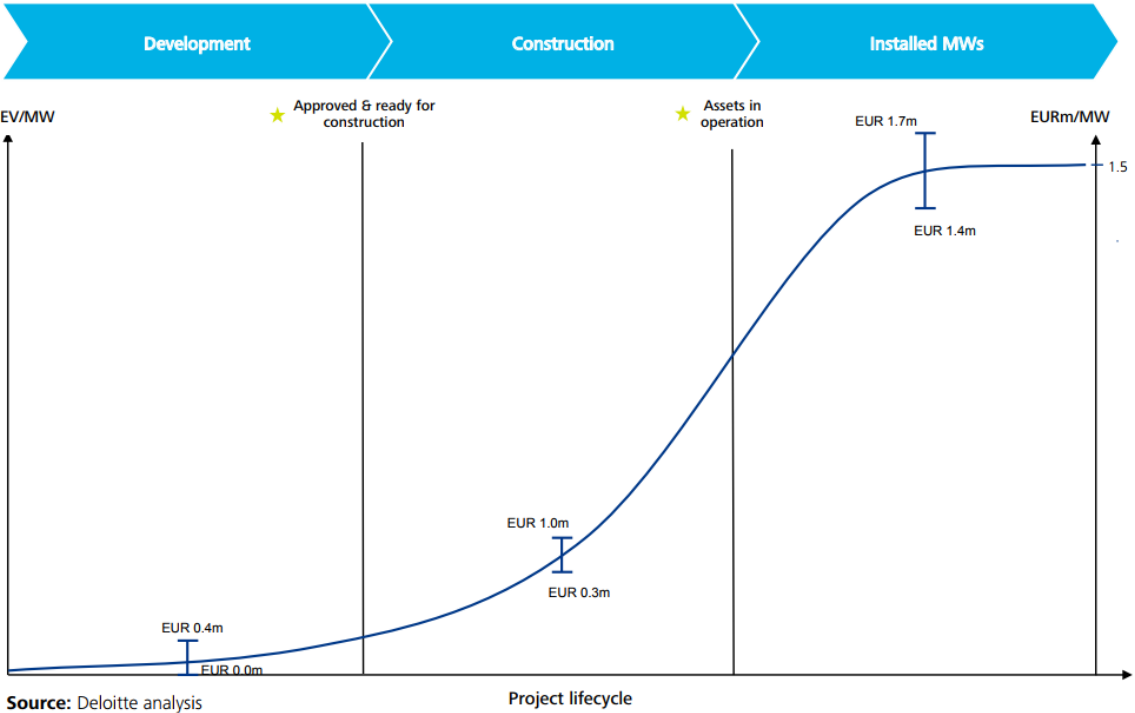
Source: Bloomberg

<sup>24</sup> Enterprise Value (EV) = Market Capitalization + Net Debt + Minority Interest + Other Adjustments

**Exhibit 5 – Value creation for onshore wind farm assets<sup>25</sup>**



**Exhibit 6 – Value creation for solar PV farm assets<sup>26</sup>**



<sup>25</sup> “A market approach for valuing wind farm assets, Global results”. April 2016 in Deloitte

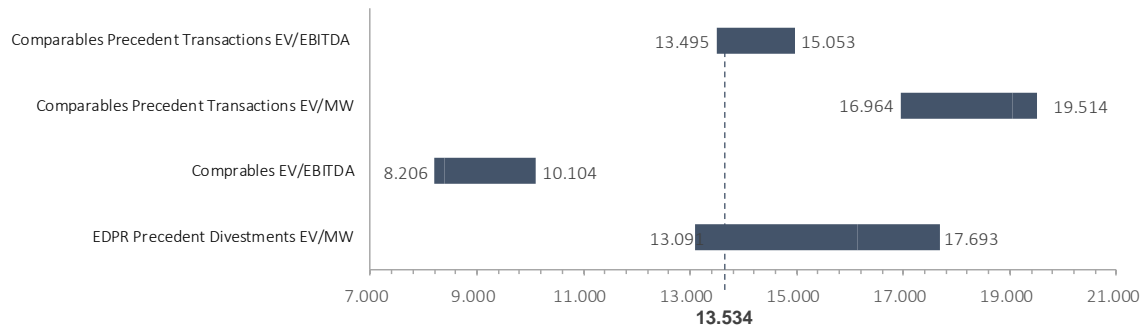
<sup>26</sup> “A market approach for valuing solar PV farm assets, Global results”. April 2016 in Deloitte



**Exhibit 7 – Football Field (million EUR)**

Multiple	Multiple Range		Implied EV	
<b>EDPR Precedent Divestments EV/MW</b>	1,3x	1,7x	13.091	17.693
<b>Comprables EV/EBITDA</b>	7,0x	8,6x	8.206	10.104
<b>Comparables Precedent Transactions EV/MW</b>	1,6x	1,9x	16.964	19.514
<b>Comparables Precedent Transactions EV/EBITDA</b>	11,5x	12,9x	13.495	15.053

\*EV/MW multiples are in millions



Output Football Field	
<b>Median EV</b>	13.534
<b>Multiple EV/EBITDA</b>	11,56x
<b>Median Share Price</b>	10,63
<b>Premium relative to €6.75</b>	57%

\*Median Enterprise value in in millions

**Exhibit 8 – Aftermath EDPR's shareholder structure (EUR)**

EDPR Shareholders' structure	Aug 2017	March 2017
<b>MFS</b>	3,1%	3,1%
<b>EDP</b>	<b>82,6%</b>	<b>77,5%</b>
<b>Other Shareholders</b>	14,3%	19,4%